

REMARKSA. Request for Reconsideration

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the position that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the amendments to the claims and the following remarks.

B. The Invention

The present invention is directed to an organic semiconductor composition. In one of the novel aspects of the invention, the semiconductor composition contains a semiconducting compound having a substituent that is chemically bonded to metal particles, inorganic oxide particles, inorganic nitride particles or polymer particles.

C. Claim Status and Amendments

Claims 1, 2 and 6-16 are presented for further prosecution. Claims 3, 4 and 13-31 have been withdrawn from consideration.

Claim 1 has been amended to include the limitations of claim 5 and claim 5 has been cancelled. Claim 1 now recites that the organic semiconducting compound is a  $\pi$ -conjugated polymer or oligomer.

Claim 1 has also been amended to recite that the particles are metal, inorganic oxide, inorganic nitride or polymer particles. Support for this amendment can be found in par. 2 on page 32.

Claim 1 has further been amended to clarify that the particles are chemically bonded to the substituent of the organic semiconducting compound. Support for this amendment can be found on page 18, lines 8-11, in par. 3 on page 20 and in Figures 1(a)-1(c).

Claims 2, 6, 9, 11 and 12 have been amended as a result of the amendment to claim 1. No new matter has been added.

D. Rejections under § 112, second paragraph

Claims 1, 2 and 5-12 had been rejected as indefinite for two reasons. First, the Examiner stated that the phrase "combining with the particles" is ambiguous because it can include chemical bonding, mixing or dispersing.

As discussed above, Applicants have amended claim 1 to clarify that the particles are chemically bonded to the substituent of the organic semiconducting compound. It is believed that this amendment overcomes the indefiniteness rejection.

Second, the Examiner had stated that the "particles" are indefinite because "particles" broadly include sub-atomic

particles as evidenced by Bao (US 6,107,117). Applicants respectfully disagree.

Par. 2 on page 32 of the application defines the particles as metal particles, inorganic oxide particles, inorganic nitride particles or polymer particles. Sub-atomic particles are not within this definition. Applicants submit that those skilled in the art would not interpret "particles" to include sub-atomic particles.

In addition, claim 1 recites that the particles chemically bond to the semiconducting compound. Using conventional terminology, sub-atomic particles are not referred to as "chemically bonding" to other compounds. With regard to the teachings of Bao, col. 1 explains that the carrier mobility is a measure of the electron "particle" drift velocity. Bao does not explain that the electron "particles" are chemically bonded to other compounds. It is therefore believed that "particles" is not indefinite.

#### E. Prior Art Rejections

The Examiner had indicated that the subject matter of claims 7-12 is allowable.

Claims 1 and 2 had been rejected as being anticipated by Takahashi (US 4,590,541). Claims 1 and 2 had been rejected as being anticipated by Ootsuchi (JP 3-273687). Claims 1, 2, 5 and

6 had been rejected as being anticipated by Hosokawa (EP 0488321).

1. Takahashi and Ootsuchi do not teach or suggest an organic semiconducting compound which is a  $\pi$ -conjugated polymer or oligomer

The subject matter of claim 5 had not been rejected based on Takahashi or Ootsuchi. As discussed above, Applicants have amended claim 1 to include the limitations of claim 5. It is therefore believed that claim 1 is patentable over Takahashi and Ootsuchi.

2. Hosokawa does not teach or suggest particles chemically bonded to an organic semiconducting compound

Hosokawa teaches an electroconductive polymer that is coated with metal particles (page 3, lines 1-2). The coating provides protection against oxidation (page 3, lines 13-14). Thus, Hosokawa teaches that the metal particles are located in a separate layer from the polymer.

As discussed above, Applicants have amended claim 1 to recite that the particles are chemically bonded to the organic semiconducting compound. This aspect of the present invention is not taught or suggested by Hosokawa. It is therefore

respectfully submitted that claim 1 is not anticipated by Hosokawa.


F. Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate requests are hereby made and authorization is given to debit Account # 02-2275.

Respectfully submitted,

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